

**REMARKS**

In light of the following remarks, Applicants respectfully traverse and request reconsideration.

Claims 1, 2, 4, 6-10, 12-16, and 18-24 are pending in the present application. Of these claims, 1, 2, 4, 8, 10, 14-16, 18, and 23 stand rejected. The Applicants respectfully traverse the rejections of these claims and request reconsideration. The remaining claims of the pending claims have either been objected to or allowed.

Claims 2 and 23 continue to be rejected under 35 U.S.C. § 112, second paragraph. In particular, the Office Action asserts that claim 2 "appears to be misdescriptive because figures 2 and 3 do not show the limitation 'the switchable voltage supply circuit is coupled to at least an I/O pad supply voltage and selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage.'" Although the Examiner appeared to agree during an Examiner Interview on December 21, 2004 that figure 2 illustrates that the subject matter in question, the rejection of claim 2 has nonetheless been maintained for the exact same grounds previously presented. Notwithstanding, the specification clearly teaches on page 5, line 1 that supply voltage 108 is an I/O pad supply voltage. Moreover, lines 11-21 of page 6 of the present application clearly give an example where the selected differential receiver supply voltage is higher than the I/O pad voltage 108. Thus, figure 2, in conjunction with the accompanying sections of the specification describing this figure indeed show all of the claimed elements of claim 2.

The Office Action also asserts that the element "selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage" is allegedly unclear "since it is impossible to have a voltage which is higher than itself because the differential receiver supply voltage is a voltage at the I/O pad supply voltage." This conclusion appears to be based on an incorrect reading of the claim language and also of the specification. Claim 2 features "the switchable voltage supply is coupled to at least an input/output pad supply voltage. As explained previously, this claimed element does not necessitate that the differential receiver supply voltage selected, which is a higher voltage than the I/O pad supply voltage, are the same voltage. The

Office Action appears to misread the claim language by equating the selected differential receiver supply voltage as being the input/output pad supply voltage. The language of claim 2 simply does not necessitate this reading and, in fact, cannot be limited to such. If the claim language stated, for example, "selects differential receiver supply voltage to be the input/output pad supply voltage that is a higher voltage than the input/output pad supply voltage," the point made in the present Office Action might have some validity. Clearly, however, this is not what the claim language says. The Applicants further direct the Examiner to lines 11-21 on page 6 of the specification for an example where the specification teaches selection of the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage. Accordingly, the Applicants respectfully submit that claim 2 is definite under the requirements of 35 U.S.C. § 112, second paragraph and submit that this rejection should be withdrawn.

Claim 23 is also believed to be definite for the above reasons.

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by Setty et al. (U.S. Patent No. 6,091,300). The Applicants again respectfully traverse this rejection based on the following reasons.

In response to Applicants' previous arguments filed on January 3, 2005, the present Office Action sets forth reasons why the Examiner disagrees that Setty fails to teach the claimed element of "within at least one of the selected receive or supply voltages is higher than a maximum voltage level of the input voltage." In particular, the Office Action asserts that col. 3 of Setty discloses that the voltages  $V_{ip}$  or  $V_{im}$  are less than  $V_{dd}-|V_{gs}|$  or equal to  $V_{dd}-V_a-V_{gs}$ . Setty, however, actually teaches that the common-mode voltage level for  $V_{ip}$  and  $V_{im}$  can be chosen to a value between  $|V_{gs}|+V_a$  and  $V_{dd}-|V_{gs}|$ . The common mode voltage, by definition, is the average of the values at the inputs  $V_{ip}$  and  $V_{im}$ . In other words, the disclosed "maximum voltage" of Setty is actually the common-mode voltage, not the absolute maximum voltage that either of the inputs  $V_{ip}$  or  $V_{im}$  may reach. Setty is silent as to any specific teaching that the selected supply voltage, either (e.g.,  $V_{dd}$  or  $V_{dd}-V_a$ ) is affirmatively set to be higher than a maximum voltage level of the input voltage (i.e., the actual maximizing of  $V_{ip}$  or  $V_{im}$ , not the range of the common-mode voltage). Therefore, the assertion that "Setty discloses [a] specific range of  $V_{ip}$  or  $V_{im}$  such that [these values] will not be exceeding the  $V_{dd}$  or  $V_{dd}-V_a$ " is not

correct. Rather, Setty discloses that the common mode voltage, which is the algebraic average of the signals  $V_{ip}$  and  $V_{im}$  may be chosen to be in a range between  $|V_{gs1}| + V_{dd}$  and  $V_{dd} - |V_{gs5}|$ . The maximum values of  $V_{ip}$  and  $V_{im}$  are not taught to be bound within this range. Moreover, this teaching in Setty does not require that the individual input voltages  $V_{ip}$  and  $V_{im}$  be bound to be less than the supply voltage  $V_{dd}$ . Accordingly, Applicants respectfully submit that Setty does not teach or suggest all of the elements of claim 1 and the rejection should be withdrawn accordingly.

Claims 4, 8, 10, 14-16, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Setty. In addition to reasserting the relevant marks made in previous responses to previous Office Actions, the Applicants again respectfully assert that these claims are allowable on their merits and also due to the reasons presented above with respect to independent claim 1.

In light of the foregoing remarks, the Applicants respectfully submit that all of the pending claims are allowable over the prior art of record and respectfully request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

By: 

Patrick B. Law  
Registration No. 41,549

Date: April 25, 2005

VEDDER, PRICE, KAUFMAN &  
KAMMHOLZ, P. C.  
222 N. LaSalle Street, SUITE 2600  
Chicago, IL 60601  
Telephone: (312) 609-7970  
Facsimile: (312) 609-5005

CHICAGO/#1360929